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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,778	09/30/2003	Jerry Waikit Tsui	CA920020061US1	4447
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EXAMINER RANKINS, WILLIAM E				
ART UNIT		PAPER NUMBER		
3696				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/674,778

Applicant(s)

TSUI ET AL.

Examiner

WILLIAM E. RANKINS

Art Unit

3696

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 09/30/2003 and 02/14/2008 was filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Status of Claims

Claims 1-20 are pending in this application. Claims 2-5, 7-12, 15 and 16 are amended.

Response to Arguments

1. Applicant's arguments filed 04/24/2009 have been fully considered but they are not persuasive. Claims 2, 7 and 12 were rejected under 35 USC 101 and 112 2nd as being preemptive in an attempt to cover every substantial application of billing. The claims as amended do not overcome this rejection.

2. Applicant's arguments, see pgs. 10-18, filed 04/24/2009, with respect to the rejection(s) of claim(s) 1-20 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of review of the claimed subject matter and an updated search.

A review of the claims and updated search necessitated the rejections below.

Claim Objections

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claim 1-5, 11-15 and 16-20 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-5 are directed toward a software system which is not a statutory class of invention. Software in general is not a statutory class of invention. Claims 11-15 are also directed to software (web service interface). Claims 16-20 are directed toward a system which is comprised of software. Again, software is not a statutory class of invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 2, 6, 7, 11, 12, 16 and 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of the above claims recites first billing functions but the first billing functions are not defined in the claims above or in the specification.
2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "associated with" in claims 1, 6, 11, and 16 is a relative term which renders the claim indefinite. The term "associated with" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 6, 7, 9, 10, 11, 12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelting (2004/0030740) in view of Coffee (EWeek, Beyond the Buzz, Peter Coffee), PR Newswire (Granite Systems and Step 9), 15 Seconds (Building Client Interfaces for .NET Web Services) and David Orenstein (Quickstudy: API).

As per claim 1:

Stelting does not specifically disclose:

A software system digitally encoded in at least one machine readable medium configured to usable by at least one machine for use in a billing service, wherein a plurality of first billing functions is provided by said billing service to computing applications residing on one or more computing devices in a distributed network, the software system comprising:

a. an interface defined for a billing service, said interface being adapted for coupling to a billing engine, said billing engine residing on a computing device in said distributed network and being adapted to perform said plurality of first billing functions, said interface comprises a plurality of application programming interfaces, each of said application programming interfaces being associated with a first billing function and

being implemented such that the first billing function associated therewith is performed after a web service invocation that commands performance of said first billing function is received by said web service; and

b. a plurality of object classes, each of said object classes defining objects for storing data utilized by said billing engine and for communicating said data to said billing engine through at least one interface, said interface being used to provide said billing in a network; and

said web service interface being used to provide said billing service as a web service that is configured to be invoked by said computing applications in said distributed network.

However, Stetling discloses a method of generating a web service including first and second service components for inclusion in the web service and including invoking rules (Abstract). Stetling discloses networked computing via the web through the use of application programming interfaces (Para. 0004) and SOAP for information exchange (Para. 0007) and defines a web service as being programmable application logic accessible using standard communication protocols and representing black box functionality (Para. 0006). Stetling goes on to define a web service as a service or combination of services configured for use over a network (Para. 0022). Stetling discloses the web service clients operating to query web service registries and are provided access to web services as well as invoking rules or rules to run the particular web service or bind the web service to an application (Para. 0024). Stetling discloses the web service created to include a billing service (Para. 0044). Stetling also discloses

web service interfaces such as that of Fig. 8 component 738 which is specific to the provider of a service such as shipping or billing (Para. 0043).

PR Newswire discloses the integration of Granite systems Xpercom system and Step 9's iCustomer. Xpercom enables service providers to accurately track network resources using API that treats network elements as objects. Each object class has a set of attributes and operations that can be performed with or for that object (Page 2, Para. 2). iCustomer allows carriers to optimize and tailor business functions within the organization through a framework which allows customers to combine iCustomer software with components such as billing (Page 2, Para. 3). Step 9 is a leading provider of web-enabled enterprise OSS solutions to the emerging carrier and service provider market (Pg. 3, Para. 1).

Coffee discloses Object Oriented Programming in Web Services in which application feature lists would be determined by users rather than vendors to create a tailored enterprise application (Pg. 1 Para. 2).

Additionally, 15 seconds discloses Web services functionality and communication using SOAP protocols, enabling users to access web servers and their business logic remotely without compromising security (Pg. 1, Para. 1) and the Microsoft.NET architecture emphasis on web services (Pg. 1, Para. 2).

Finally, Orenstein discloses application programming interfaces and their function. API's provide a means for requesting program services by granting access to or opening an application (Pg. 1, Para. 2). API's are how programs exchange information.

The examiner asserts that the claimed web service interface defined for a billing service exists in the prior art. Application programming interfaces are old and well known as shown and are known to perform the functions claimed above, namely accessing specific functions. Object classes have also been used in the field of Web services to customize applications. The examiner asserts that the billing functions are intended use and that web services, application programming interfaces and object classes exist in the prior art and are known to be used together in web services.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of this invention to combine the methods of Stetling, PR Newswire, Coffee, 15 Seconds and Orenstein. One of ordinary skill in the art at the time of this invention would have been motivated to do so in order to provide a customizable web services billing application.

As per claim 2;

Stetling does not disclose:

The software system as claimed in claim 1, wherein said interface is extendable to provide said computing application with additional billing functions, and said billing engine is adapted to perform said additional billing functions.

However, the examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of this invention to consider the design of the system to support additional functions or capabilities in the future.

As per claim 4;

Stelting does not disclose:

The software system as claimed in claim 1, wherein said billing service is a rating service, and wherein the web service interface defined for said rating service comprises application programming interfaces associated with at least one of the following first billing functions:

- i. registering billable services;
- ii. obtaining a billing rate package for a billable service;
- iii. subscribing a billable service for a billing account;
- iv. unsubscribing a billable service for a billing account;
- v. obtaining subscribed billable service instances for a billing account; and
- vi. processing billing events.

However, the examiner asserts that the functions of the rating service or billing service can be customized to each client or user. The specific functions associated with each application programming interface are customized for the needs of the client or user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of this invention to create applications of specific functionality in the web services application.

Claim 5 is rejected under the same rationale used to reject claim 4. The examiner asserts that object classes can define any number of objects depending upon the specific function desired by the client or user.

4. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stelting (2004/0030740) in view of Coffee (EWeek, Beyond the Buzz, Peter Coffee), PR Newswire (Granite Systems and Step 9), 15 Seconds (Building Client Interfaces for .NET Web Services) and David Orenstein (Quickstudy: API) and Hopkins (2007/0078950).

As per claim 3;

Stelting does not disclose:

The software system of claim 1, wherein said billing service is a billing account service, and wherein the web service interface defined for said billing account service comprises application programming interfaces associated with at least three of the following functions:

1. creating billing accounts
2. deleting billing accounts
3. creating records of billing events in a billing account
4. setting the status of a billing account
5. obtaining the status of a billing account
6. obtaining an invoice for a billing account

However, Hopkins discloses Web services API's providing the ability to login, create a new record, update a record, query records and delete records (Para. 0072). As previously discussed, billing is a general application of web services, the specific functionality of which can be applied in applications or in a general sense as disclosed by Hopkins.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of this invention to combine the methods of Hopkins with Stelting, PR Newswire, Coffee, 15 Seconds and Orenstein. One of ordinary skill in the art at the time of this invention would have been motivated to do so in order to apply basic functionality to a particular application.

Claims 6-10, 11-15 and 16-20 are rejected under the same rationale and references used to reject claims 1-5. Providing a system, interface and/or computer readable medium to implement the claimed invention is shown in the prior art of record in this application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William E. Rankins whose telephone number is 571-270-3465. The examiner can normally be reached on M-F 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dixon can be reached on 571-272-6803. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William E Rankins/
Examiner, Art Unit 3696
07/16/2009

/Frantzy Poinvil/
Primary Examiner, Art Unit 3696